# Important Advances in Clinical Medicine

## Epitomes of Progress—Obstetrics and Gynecology

*The Scientific Board of the California Medical Association presents the following inventory of items of progress in obstetrics and gynecology. Each item, in the judgment of a panel of knowledgeable physicians, has recently become reasonably firmly estabished, both as to scientific fact and important clinical significance. The items are presented in simple epitome and an authoritative reference, both to the item itself and to the subject as a whole, is generally given for those who may be unfamiliar with a particular item. The purpose is to assist the busy practitioner, student, research worker or scholar to stay abreast of these items of progress in obstetrics and gynecology which have recently achieved a substantial degree of authoritative acceptance, whether in his own field of special interest or another.*

*The items of progress listed below were selected by the Advisory Panel to the Section on Obstetrics and Gynecology of the California Medical Association and the summaries were prepared under its direction.*

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## Efficacy and Safety of Prenatal Genetic Amniocentesis

BETWEEN July 1, 1971, and June 30, 1973, nine American prenatal diagnosis centers collected and pooled information on amniocentesis. Data on 1,040 patients and 992 controls were analyzed.

In 91.3 percent of the patients amniocentesis was done for cytogenetic indications and in 8.7 percent for metabolic reasons. Abnormal fetuses were diagnosed in 2 percent of women over the age of 35, in 1.5 percent of women who previously had had a child with Down syndrome and in 16.7 percent of balanced translocation carriers. In patients at risk for X-linked or autosomal recessive conditions, fetal abnormalities were diagnosed in numbers consistent with the calculated probabilities. Six erroneous diagnoses were made (three of them involving only the sex of the infant), so that the accuracy of the procedure was 99.4 percent.

There were no differences as to maternal or fetal complications between the patients and the controls. Rates of fetal loss (spontaneous abortions, *in utero* deaths and stillbirths) were similar. Both at newborn examination and at reevaluation one year later, the offspring in the two groups appeared comparable.

Interestingly, the use of ultrasonic placental localization did not appear to reduce maternal complications or fetal loss. A finding worthy of note was the fact that the incidences of both vaginal bleeding and fetal loss increased with increasing numbers of needle insertions; the differences were statistically significant for bleeding. This suggests that taps should not be done unduly early in pregnancy (16 menstrual weeks seems optimal in our hands) and should not be done by personnel who are not well experienced in the procedure.

In summary, the rate of serious side effects secondary to amniocentesis probably does not

exceed 0.5 percent. Hence amniocentesis should be considered by all pregnant women over the age of 35, women who have previously borne a baby with a chromosomal anomaly, persons with a history of Down syndrome in close relatives, balanced translocation carriers, known or suspected carriers of X-linked or autosomal recessive conditions, and women who have given birth to children with neural tube defects (where the recurrence risk is 5 percent, and diagnosis can be made by analysis of the amniotic fluid for alpha-fetoprotein). Amniocentesis has now been shown to be both safe and accurate.

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REFERENCES

The National Institute of Child Health and Development National Registry for Amniocentesis Study Group. Midtrimester amniocentesis for prenatal diagnosis: Safety and accuracy. JAMA 236:1471-1476, Sep 27, 1976

Golbus MS: The antenatal detection of genetic disorders: Current status and future prospects. Obstet Gynecol 48:497-506, Oct 1976


## Ultrasound and Gynecology

AT ONE TIME or another, even the most experienced examiner has questioned his evaluation of a patient's pelvic viscera. New physicians are taught that good medicine dictates an examination under anesthesia before pelvic laparotomy. Ultrasound offers clinicians an additional noninvasive diagnostic technique. Ultrasound may assist in the following situations:

- Extrauterine pregnancy
- Tubo-ovarian abscess
- Cystic ovarian masses
  Cystadenomas
  Cystic teratomas
- Solid ovarian masses
- Complications of dilation and curretage (creation of false passage within the myometrium, periuterine hematomas, and so forth)
- Uterine foreign bodies (including intrauterine devices)
- Documentation of suspected or unsuspected pregnancy in the presence of other uterine pathology
- Demonstration of gestational sac for amniotomy

In each of the listed situations the findings may not be clear enough to indicate a specific diagnosis; however, the ultrasonographer should be able to confirm or disprove the clinician's suspicions concerning the presence and size of a lesion. Moreover, in a significant number of cases the echographic findings will be specific enough to indicate more appropriate management than that contemplated before the test was done.

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Arnon SD, Ahern JK: Instrumentation of the uterus under ultrasound control. Read at the World Federation for Ultrasound in Medicine and Biology, San Francisco, Aug 1976


## A Modern Approach to the Management of Intrauterine Fetal Death

KNOWLEDGE of a retained dead fetus is a source of considerable mental distress, inconvenience and anxiety to a patient. The prospect of carrying a dead fetus *in utero* even for a few days tends to be emotionally traumatic. While 90 percent of such patients will go into spontaneous labor within four weeks, even this period of time can be psychologically distressing. Usually if the patient delivers before four weeks there are no medical sequellae or complications. However, a retained dead fetus beyond four weeks occasionally poses a serious hazard to the pregnant woman. Coagulation defects have been observed in 40 percent of patients with retention of the dead fetus beyond six weeks. Therefore, the woman who has a retained dead fetus beyond four weeks must be followed closely with weekly and possibly biweekly fibrinogen levels to determine whether this specific serious complication is occurring. Obviously it would be safer and more convenient to evacuate the uterus as soon as confirmation of death *in utero* is established.

All too frequently the cervix is not favorable or responsive to oxytocin stimulation. For this reason many physicians in the past have employed the approach of watchful expectancy in the hope that spontaneous labor may ensue with resultant delivery in an appropriate period of time.

Many studies in the literature attest to the successful use of prostaglandins to terminate pregnancy at any stage of gestation. Trials of prostaglandins $F_{2\alpha}$ and $E_2$ for induction of labor at or near term have shown them to be as effective as oxytocics in initiating labor and producing a normal labor pattern and successful outcome. Recently, prostaglandins $E_2$ vaginal suppositories have been introduced as part of the armamentarium of the obstetrician.